



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,475	01/21/2004	TaiVie Chiang	STL11658	2915

7590 09/09/2005
Seagate Technology LLC
1280 Disc Drive
Shakopee, MN 55379

EXAMINER

RODRIGUEZ, GLENDA P

ART UNIT	PAPER NUMBER
----------	--------------

2651

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/761,475	CHIANG ET AL.	
	Examiner	Art Unit	
	Glenda P. Rodriguez	2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 10 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 11-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/21/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christiansen et al. (US Patent No. 6, 369, 969) in view of Garza (US Patent No. 5, 739, 969).

Regarding Claim 9, Christiansen et al. teach an apparatus comprising:

A data head (Fig. 2, Element 20);

A channel coupled to the data head (See Col. 1, L. 19-21, wherein it teaches that a read channel is used for reading operations in a disk drive.);

Circuitry coupled to the channel and configured to perform a head polarity detection routine (See Fig. 2, wherein it teaches the circuit components used to detect head polarity (by using the sync mark detector, which is its address mark, it retrieves the polarity of the particular signal being read See Also Summary of the Invention of Christiansen et al.) comprising the step of:

Searching for a good address mark using the data head during a read period with a channel polarity set to a first polarity (See Summary of the Invention of Christiansen et al. and Col. 2, L. 63 to Col. 3, L. 26, wherein Christiansen et al. teaches that the medium is previously magnetized to a

Art Unit: 2651

preferred polarity, making this the first setting for the first polarity. The medium then searches for the synch mark detector (which can be considered as a good address mark because it holds information about the location of the head with respect to the media as it is known to a person of ordinary skill in the art) that gives out the polarity of the read signal.);

Identifying the polarity of the data head based upon the channel polarity when the good address mark is detected (Col. 2, L. 63 to Col. 3, L. 26 of Christiansen et al.).

However, Christiansen et al. does not explicitly teach wherein the read gate is set for a predetermined duration. Garza teaches a magnetic media being set to read for a predetermined time with the use of a counter as disclosed in Col. 20, L. 38-45 of Garza. It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the invention of Christiansen et al. with the teaching of Garza in order to receive the data and control the amount of data being entered in the channel as taught by Garza in Col. 20, L. 18-24.

Method claim (1) is drawn to the method of using the corresponding apparatus claimed in claim (9). Therefore method claim (1) correspond to apparatus claim (9) and is rejected for the same reasons of obviousness as used above.

Allowable Subject Matter

3. Claims 2-9 and 10-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2651

preferred polarity, making this the first setting for the first polarity. The medium then searches for the synch mark detector (which can be considered as a good address mark because it holds information about the location of the head with respect to the media as it is known to a person of ordinary skill in the art) that gives out the polarity of the read signal.);

Identifying the polarity of the data head based upon the channel polarity when the good address mark is detected (Col. 2, L. 63 to Col. 3, L. 26 of Christiansen et al.).

However, Christiansen et al. does not explicitly teach wherein the read gate is set for a predetermined duration. Garza teaches a magnetic media being set to read for a predetermined time with the use of a counter as disclosed in Col. 20, L. 38-45 of Garza. It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the invention of Christiansen et al. with the teaching of Garza in order to receive the data and control the amount of data being entered in the channel as taught by Garza in Col. 20, L. 18-24.

Method claim (1) is drawn to the method of using the corresponding apparatus claimed in claim (9). Therefore method claim (1) correspond to apparatus claim (9) and is rejected for the same reasons of obviousness as used above.

Allowable Subject Matter

3. Claims 2-9 and 10-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2651

The following is a statement of reasons for the indication of allowable subject matter: the reason for indicating allowable subject matter is the inclusion of the limitation wherein if the good address mark is not found during the first read gate period, than prior to the head polarity detection routine further comprising: toggling the polarity of the channel to a second polarity; and searching for the good address mark during a second read gate period with the channel polarity set to the second polarity.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. "Signal Processing for Single and Dual Element Unshielded Magnetoresistive Heads" by Koren and "Modulation Codes for the Controlled Polarity Recording Channel" by Swanson.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda P. Rodriguez whose telephone number is (571) 272-7561. The examiner can normally be reached on Monday thru Thursday: 7:00-5:00; alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gpr

September 2, 2005.



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600